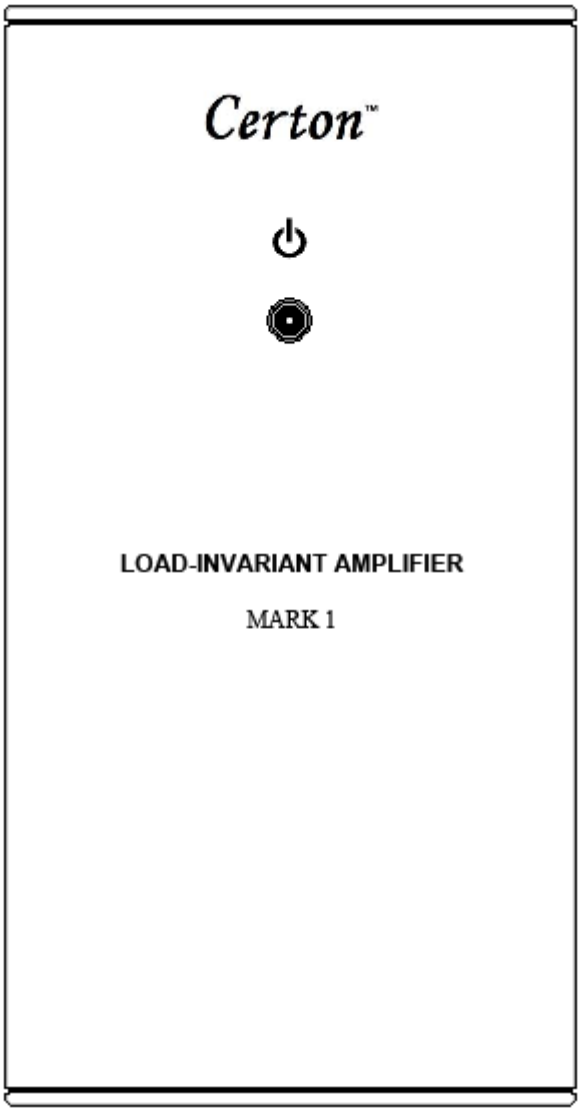
User's Manual
for
Certon Mark 1
Power Amplifier



Safety Instructions

- Do not use near water
- Do not expose to rain or moisture
- Clean only with dry cloth
- Do not block ventilation
- Do not place on a soft surface
- Do not operate near a heat source or in a confined area
- Do not use with a damaged power cord
- Use main plug to disconnect from power grid
- Do not remove cover

A lightening bolt triangle is used to alert the user of the risk of electric shock.

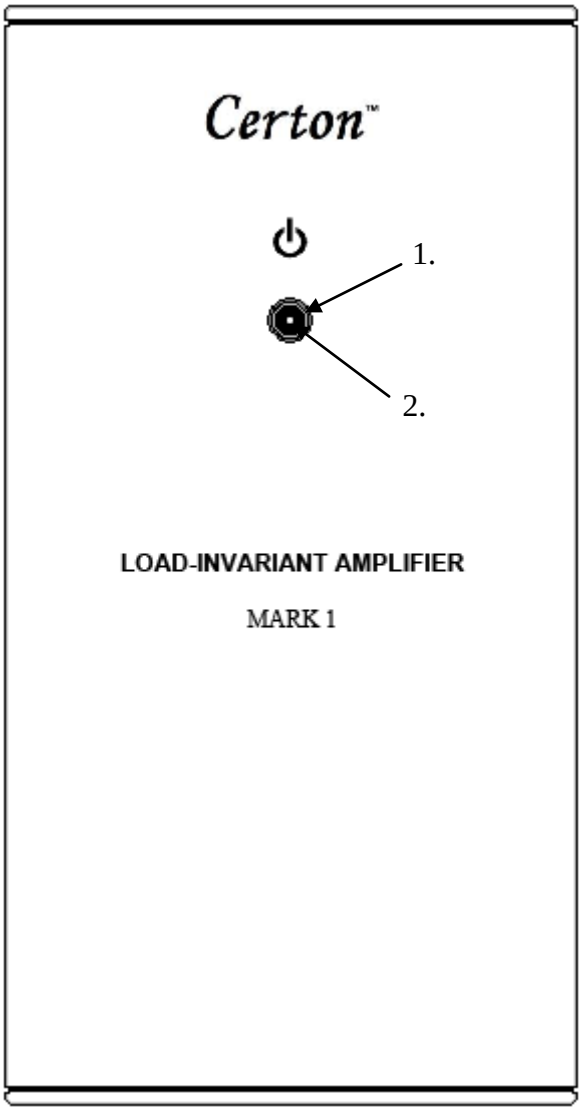
An exclamation point triangle is used to alert the user of an important operating or maintenance instruction.

Getting Started

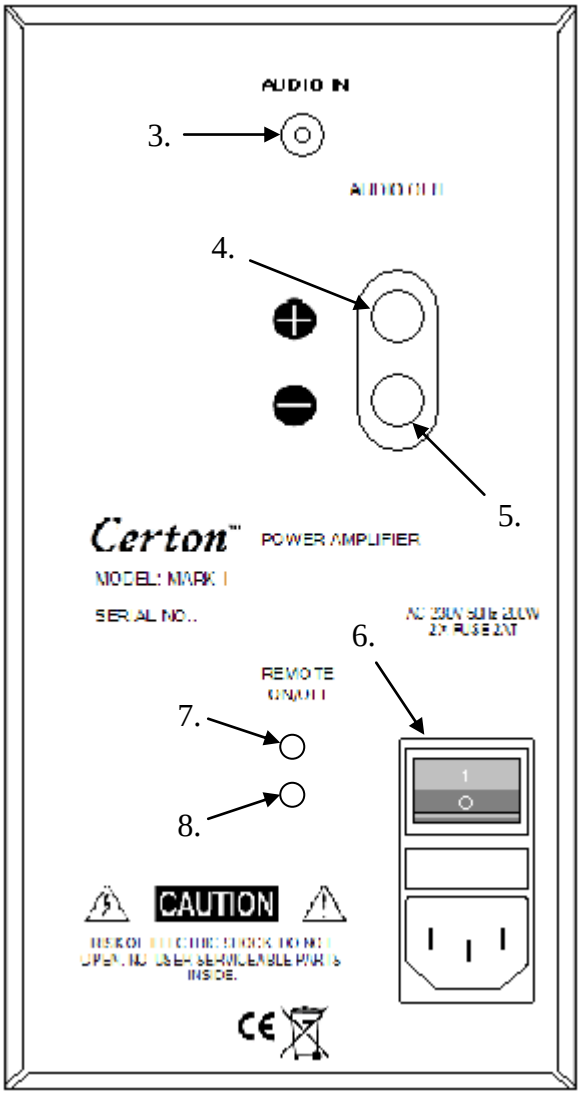
Thank you for purchasing the Certon Mark 1 monaural power amplifier. The Mark 1 features patent awarded technology for achieving powerful sound from a small enclosure.

The Mark 1 is typically used in a stereo or multi-channel set-up. Each channel requires its own power amplifier. Simply connect each Mark 1 in a set-up to its respective loudspeaker. The Mark 1 has loudspeaker output binding posts that accept bare wire, banana plugs or forks. Pay attention to the polarity of the loudspeaker. Make sure the wires are firmly attached, and are not short-circuiting the outputs of the amplifier. Connect the RCA-type phono input of the Mark 1 to the audio output of your pre-amplifier, home-theater processor or other similar audio equipment. Attach the power cord to the power inlet of the amplifier, and to a power grid outlet. Turn on the power switch at the back of the Mark 1, and press the on/off push-button on the front panel. Your Mark 1 should be ready for operation in a few seconds, in which case a LED on the push-button would illuminate with a steady light.

Controls



1. On/off push-button
2. Operation mode indicator



3. RCA-type phono audio input
4. Positive loudspeaker binding post
5. Negative loudspeaker binding post
6. Power inlet and power switch
7. Trigger input
8. Trigger output

Installation

Place the Mark 1 on a stable surface. The unit has a self-resetting heat-switch, however:

Do not place the amplifier on a thick cloth or carpet, as ventilation would be obstructed. Do not place in a confined area. Clearance should be allowed for heat dissipation on the top and sides of the enclosure.

The Mark 1 is equipped with a mains power switch on the power inlet (6) at the back. During installation, keep the power switch in the "off" position.

Firmly attach all wires. Attach the loudspeaker cables to the positive and the negative loudspeaker binding posts (4,5) of the Mark 1. Pay attention to the phase. In general, the positive terminal of the loudspeaker should be connected to the positive binding post of the amplifier, and the negative terminal of the loudspeaker should be connected to the negative binding post of the amplifier. Tightly secure the terminals. The Mark 1 is non-inverting.

Do not short-circuit the loudspeaker terminals. Protection circuitry within the amplifier will protect the unit from most overload conditions, but short-circuits may seriously harm your Mark 1. It is recommended not to use loudspeakers with a nominal impedance of less than 4 ohms.

Certon Mark 1 has been successfully tested with many difficult loads. However, it is advised not to use highly capacitive loudspeaker cables, as this reduces the phase margin of the amplifier and may potentially cause failure.

Attach an RCA-type signal cable between the audio input (3) of the Mark 1 and your pre-amplifier, home-theater processor or corresponding unit. Mark 1 is unbalanced, however a signal transformer (e.g. XLR to phono converter) may be used for balanced operation.

Be sure not to connect the audio input of the Mark 1 to a line output. Doing so may cause damage to your loudspeakers and your hearing.

Mark 1 has a 12 VDC trigger input (7) and output (8). You may daisy-chain several amplifiers. Simply connect a trigger output of one unit to a trigger input of another unit. Doing this enables all units to be powered-up by control from your pre-amplifier, home-theater processor or corresponding unit.

Attach the power cord between the power inlet of the amplifier and a power grid outlet. Turn the power switch at the back of the Mark 1 to the "on" position.

Operation

Your Certon Mark 1 is now responsive to either a 12 VDC signal on the trigger input (7), or to the actuation of the on/off push-button (1) on the front of the unit. Either should take the Mark 1 out of stand-by mode.

Provided there is no fault condition, the unit should be ready for operation within a few seconds. A blinking operation mode indicator (2) at the center of the push-button indicates that the unit is starting, while a steady light indicates that the unit is ready for use.

Removing the 12 VDC signal or pressing the on/off push-button again takes the amplifier back to stand-by mode.

When the unit switches on or off, a discrete click may be heard in the loudspeaker. This is normal for the Mark 1.

Maintenance

It is recommended to use a dry non-abrasive cloth to clean the amplifier.

Do not use detergents or other strong chemicals to clean your Certon Mark 1 amplifier.

There are no user-serviceable parts inside the enclosure. Opening the cover exposes high-voltage surfaces that may cause electric shock.

Your Certon Mark 1 has a DC protection circuit through which DC faults are detected. In the event of a malfunction within the unit, or in another component of your audio system that leads to a DC offset, the Mark 1 shuts down. An intermittent blinking of the operation mode indicator (1) indicates that a DC fault has occurred. This may be a single event or a persistent condition. Try to reset the amplifier by pressing and holding the on/off push-button for a few (3 – 5) seconds. If the problem persists, try a different pre-amplifier (or completely turn off the pre-amplifier) and reset the Mark 1 once more. If this does not rectify the problem, your Mark 1 may require servicing by a qualified technician.

Do not repeatedly reset the Mark 1 without taking consecutive action to try to resolve the problem with DC offset, as this may subject the amplifier to unnecessary stress. In the event of loud thumps, clicks or pops from the loudspeaker at reset, do not proceed but seek assistance from a qualified technician.

There is a heat switch inside the enclosure. The heat switch protects the amplifier against excessive and potentially harmful temperatures that may result e.g. from loud listening for prolonged periods at elevated ambience temperatures. When the heat switch trips, the amplifier turns off. The operation mode indicator blinks to indicate this condition. As soon as the temperature is safe again, the amplifier automatically resumes operation.

Specification

Power (8 Ohms)	125 Watts RMS
Damping factor (8 Ohm)	>5000 @ 500 Hz
Input impedance	50 kOhm
Input voltage (at full power)	1 Volt RMS
THD+N	< - 60 dB
Output binding posts	WBT
Input jack	RCA phono type (cinch)
Remote trigger voltage	12 VDC
Top and sides	Brushed stainless steel
Front fascia	Black or natural anodised aluminum
Weight	10 kg (22 lb)
Size of enclosure:	12 x 31 x 30 cm. (4.7 x 12.2 x 11.8 in.)
Mains voltage	AC 230 Volts (EU)